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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,445	08/01/2003	Charles C. H. Yang	D0332	2838

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EXAMINER

BLAU, STEPHEN LUTHER

ART UNIT	PAPER NUMBER
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3711

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,445

Applicant(s)

YANG, CHARLES C. H.

Examiner

Stephen L. Blau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a. On page 5 line 1 the continuous wall is referred to as reference number 66 while in figure 4 and in line 12 of page 5 the opening is referred to as reference number 66.
 - b. On page 5 line 1 the central cavity is referred to as reference number 68 while in figure 5 and in line 16 of page 5 the weights are referred to as reference number 68.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Aizawa.

Aizawa discloses a metal striking plate of titanium (Col. 6, Ln. 12), a central housing in the form of a front shell (87a, Fig. 6) which a hosel and shaft is connected

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(Figs. 6, 1) and including a surface to fittingly engage with a striking plate rear surface (Fig. 6), a back housing in the form of a rear shell (87b, Fig. 6) having an edge wall secured to a portion of a central housing part (Fig. 6, Col. 6, Lns. 37-40), and means for securing a striking plate to a central housing part in the form of a plurality of metal pegs (95, 97) unitarily interconnecting a striking plate and central housing part together (Fig. 6, Col. 6, Lns. 53-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aizawa in view of Werner.

Aizawa discloses forming the head body of carbon fiber reinforced with resin (Col. 7, Lns. 60-67). Aizawa lacks a central housing part and back housing part being a graphite carbon fiber and a central housing part and back housing part being secured together by cement. Werner discloses a forward shell and rear shell being made of a graphite fiber (Col. 2, Lns. 8-15) and a forward shell and rear shell being secured together by cement (Col. 6, Lns. 38-40, Fig. 8A). In view of the patent of Werner it would have been obvious to modify the head of Aizawa to have a central housing part

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and back housing part being a graphite carbon fiber in order to use a carbon fiber used in the market place to form golf heads. In view of the patent of Werner it would have been obvious to modify the head of Aizawa to have a central housing part and back housing part being secured together by cement in order to utilize an adhesive used in the market place to secure composite shells together in forming a golf head.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aizawa in view of Werner as applied to claims 3 and 5 above, and further in view of Helmstetter.

Aizawa lacks striking plate weighing approximately 4.5 ounces (127 grams) and the combined weight of a central housing part and back housing part weighing about 4.5 ounces (127 grams). Helmstetter discloses a mass of a head being in a range of 165 to 300 grams (Col. 13, Lns. 58-60). In view of the patent of Helmstetter it would have been obvious to modify the head of Aizawa to have a striking plate weighing approximately 4.5 ounces (127 grams) and the combined weight of a central housing part and back housing part weighing about 4.5 ounces (127 grams) in order to have a total head weight (254 grams) used in the market place.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aizawa in view of Bliss and Hasebe.

Aizawa lacks at least one weight in the range of 5-30 grams secured to the inner bottom wall of the back housing part along the centerline plane between the heel and toe of the head, a center of gravity lies on the centerline plane between the heel toe,

and within the back part cavity and below the centerline plane between top and bottom surface of the central housing part.

Bliss discloses a weight secured to an inner bottom wall (Abstract, Fig. 5), a center of gravity lies on the centerline plane between the heel and toe (Fig. 5), and within the back part of a head (Fig. 5) and below the centerline plane between top and bottom of a head (Fig. 5) in order to take advantage of vertical gear effect to tailor the amount of backspin imparted to a ball for a given loft angle thereby enabling a club to deliver the ideal trajectory without over spinning or under spinning the ball [0005]. Bliss does not disclose the specific mass of the weight but clearly an artisan skilled in adding weight to a sole to move center of gravity would have added a suitable mass to the sole in which a mass of 5-30 grams is included. In view of the Bliss it would have been obvious to modify the head of Aizawa to have a weight secured to an inner bottom wall, a center of gravity lies on the centerline plane between the heel and toe, and within the back part cavity and below the centerline plane between top and bottom of a head in order to take advantage of vertical gear effect to tailor the amount of backspin imparted to a ball for a given loft angle thereby enabling a club to deliver the ideal trajectory without over spinning or under spinning the ball. In view of the Bliss it would have been obvious to modify the head of Aizawa to have at least one weight in the range of 5-30 grams in order to add a sufficient amount of weight to move the center of gravity of a head.

Hasebe discloses at least one weight (B) secured to the inner bottom wall of the back housing part along the centerline plane between the heel and toe of the head (Fig.


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4). In view of the patent of Hasebe it would have been obvious to modify the head of Aizawa to have at least one weight secured to the inner bottom wall of the back housing part along the centerline plane between the heel and toe of the head in order to maximize the amount of energy transferred to a ball at impact by maximizing the amount of weight directly behind the ball.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Greg Vidovich whose telephone number is (703) 308-1513. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9306)

slb/ 7 September 2004


STEPHEN BLAU
PRIMARY EXAMINER